Headquarters
United States Army, Europe, and Seventh Army
Unit 29351
APO AE 09014
30 June 1992

USAREUR Regulation 50-3

Nuclear and Chemical Weapons and Materiel

NUCLEAR, BIOLOGICAL, CHEMICAL (NBC) DEFENSE MATERIEL

Summary. This regulation establishes policy for using, maintaining, and storing nuclear, biological, and chemical defense materiel in USAREUR.

Applicability. This regulation applies to USAREUR major, separate major, and assigned commands (USAREUR Reg 10-5).

Supplementation. Commanders will not supplement this regulation without Commander in Chief, USAREUR (AEAGD-SM-S), approval.

Interim Changes. Interim changes to this regulation are not official unless authenticated by the Deputy Chief of Staff, Information Management, USAREUR. Interim changes will be destroyed on their expiration dates unless sooner superseded or rescinded.

Suggested Improvements. The proponent of this regulation is the Office of the Deputy Chief of Staff, Logistics, HQ USAREUR/7A (AEAGD-SM-S, 370-7255). Users may send suggestions to improve this publication on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to the Commander in Chief, USAREUR, ATTN: AEAGD-SM-S, Unit 29351, APO AE 09014.

1. PURPOSE

This regulation establishes policy for issuing, using, storing, maintaining, and disposing of nuclear, biological, and chemical (NBC) defense materiel in USAREUR.

2. REFERENCES

Appendix A lists references.

3. EXPLANATION OF ABBREVIATIONS

The glossary explains abbreviations used in this regulation.

4. RESPONSIBILITIES

a. Commanders of USAREUR Major, Separate Major, and Assigned Commands. Commanders of USAREUR major, separate major, and assigned commands (USAREUR Reg 10-5) will enforce the policies established by this regulation and related publications concerning NBC defense materiel (app B).

b. Unit Commanders. Unit (company and equivalent level) commanders—

(1) Will review common tables of allowances (CTA), modified tables of organization and equipment (MTOE), tables of distribution and allowances (TDA), and mobilization tables of distribution and allowances (MOBTDA) to determine NBC equipment allocations. Equipment authorized by MOBTDA will be requisitioned only on mobilization. Equipment authorized by MTOE or TDA must be on hand or on valid requisition. Commanders will only requisition CTA items in quantities necessary for mission accomplishment.

(2) Will ensure soldiers and emergency-essential civilians are trained in the proper use and maintenance of authorized NBC equipment.

(3) Will take measures to adequately protect personnel who cannot be fitted with standard tariff protective equipment.

(4) Will maintain a 5 percent overage (surplus) of individual chemical equipment (ICE) above MTOE, TDA, or CTA authorizations (table 1). This overage will enable exchange of defective, depleted, or incorrectly sized items (AR 71-13).

(5) Will maintain a 5 percent overage of protective masks above MTOE and TDA authorizations for sizing purposes (AR 71-13).

(6) Are authorized a 5 percent overage above MTOE, TDA, or CTA authorizations of other class II and class IX chemical defense equipment (CDE) items (app C).

(7) Will develop two contingency ICE packs for newly assigned soldiers within 30 days after their arrival to the unit (table 1). Clear plastic bags, and other suitable containers may be used. Each ICE pack will be packaged separately. Each ICE pack will be marked with the soldier's name, duty section, platoon, sizes, lot numbers, and expiration dates for inventory and inspection purposes.

Table 1
ICE Pack Contents

Item	"A" Set	"B" Set
Filter element set (M13A2) or canister (M10A1 or C2)	1	1
Hood for protective mask	1	1
Skin decontamination kit M291	2	1
or M258A1	1	1
Chemical protective gloves with cotton liners	1 pair	1 pair
Green vinyl overboots or footwear covers, chemical protective	1 pair	1 pair
Overgarment (battle dress overgarment/chemical protective overgarment)	1	1
Helmet cover, chemical protective	1	1
M9 paper	1 roll	0

(8) Will ensure ICE packs are readily available for issue. ICE packs may be issued at the discretion of the commander and stored at detachment, separate platoon, battery or troop locations.

(9) Will inspect ICE packs for serviceability of contents at least annually and replace unserviceable items as required.

(10) Will keep accurate records on shelf-life items to ensure the oldest items are used first and requisition replacement items 6 months before the expiration date of on-hand stocks.

(a) Each company-size unit or equivalent and platoon-size element separate from its parent unit will establish an internal program to monitor lot numbers, dates of manufacture, and expiration dates of CDE shelf-life items.

(b) Reserve storage activities (RSA) and supply support activities (SSA) issue the oldest stocks unless units use advice code 2G on their requisition in blocks 65 and 66 of DA Form 2765-1 (Request for Issue or Turn-In). Individuals picking up shelf-life CDE from supply activities should inspect the expiration dates.

(11) Will ensure shortages of CDE necessary for individual survival are requisitioned with the highest authorized priority.

(12) Will establish a standing operating procedure (SOP) to maintain accountability and ensure the proper use, storage, maintenance, and disposal of NBC defense equipment according to this regulation and applicable directives.

(13) Will budget yearly for the disposal of hazardous materiels and waste. Commanders also will maintain a file of materiel safety data sheets (MSDS) for CDE that contains hazardous materiels.

c. Commanders of Chemical Units. Commanders of chemical units may stock up to 25 percent above authorizations for chemical overgarments, overboots or footwear covers, and gloves. They also will establish basic load requirements (AR 710-2) for decontaminants and smoke generating fuel (fog oil) based on their mission. Basic load storage levels will not exceed 15 days of supply and the unit's haul capability.

d. Individuals. Individuals will—

(1) Perform operator maintenance of NBC defense equipment according to the appropriate technical manual (TM).

(2) Use, store, and account for NBC defense equipment according to the unit SOP and appropriate TM, regulations, and directives.

5. INDIVIDUAL PROTECTIVE MATERIEL

a. Chemical Protective Ensemble. The chemical protective ensemble consists of a battledress overgarment (BDO) or chemical protective overgarment (CPO); glove set, chemical protective (GSCP); green vinyl overboots (GVO) or footwear covers, chemical protective overboots (FCCPO); and cover, helmet, chemical protective.

(1) BDO. The BDO is a two-piece suit in a camouflage pattern and comes in eight sizes. Wear life of the BDO is 22 days. Commanders may approve extension of wear time to 30 days with a slight increased risk of sustaining casualties. Protection time of the BDO against a liquid agent is 24 hours after gross liquid contamination.

(2) CPO. The CPO is a two-piece suit and comes in eight sizes. Wear life of the CPO is 14 days. Protection time of the CPO is 6 hours after gross liquid contamination.

CAUTION. The protective qualities of the BDO and CPO are degraded when wet with water, solvents, or petroleum products. Individuals need to wear toxicological agent protective (TAP) aprons, or wet weather gear, and take precautions to prevent wetting the overgarment with solvents and petroleum products. The protective qualities are restored when the overgarment dries. When the mission permits, individuals should replace clothing splashed with oil and grease. The BDO and CPO are unserviceable if ripped or torn.

N**OTE**. Damage to the vapor barrier bag does not affect serviceability of the BDO and CPO.

(3) GSCP. The GSCP comes in five sizes and is packaged in sets. A GSCP protects the wearer against chemical agents for 14 days. Gloves will be replaced during the 14 days if they become unserviceable or 6 hours after being contaminated with liquid agents. One GSCP will be issued for each BDO and CPO.

(4) GVO. GVOs are worn over combat boots. Central issue facility (CIF)-issued GVOs may be used for training. The GVO comes in 12 sizes (3 through 14), there are no half sizes. GVO should be ½ to 1 size larger than combat boot size. GVOs provide up to 14 days of protection. The GVO provides 12 hours of protection after becoming contaminated with a chemical agent. Commanders may extend wear time to 24 hours with some increase in risk. One pair of new, unused GVOs will be issued for each BDO and CPO.

(5) FCCPO. FCCPOs come in two sizes and are worn over combat boots. FCCPOs provide up to 14 days of protection. FCCPOs provide 12 hours of protection after becoming contaminated with a chemical agent. Small FCCPOs substitute for GVOs, sizes 3 through 8; large FCCPOs substitute for GVOs, sizes 9 through 14.

(6) Chemical-Protective Helmet Cover. The chemical protective helmet cover protects the kevlar helmet from chemical and biological contamination. The cover is a piece of butyl-coated nylon cloth. It is olive green and comes in one size.

b. TAP Outfit. When worn with the M9A1 protective mask, the TAP outfit provides protection against liquid chemical agents. The wearer also is protected from agent vapors and aerosols when the appropriate clothing is worn under the impermeable protective outfit. The outfit consists of coveralls, TAP M3, TAP mask hood M3, TAP boots M2A1, and TAP gloves.

c. Protective Masks. Protective masks protect the face, eyes, and respiratory tract of the wearer from field concentrations of chemical and biological agents. The following masks are found in USAREUR:

(1) M17 Series Masks. M17 series chemical-biological field masks will be replaced by the M40 series chemical-biological field mask. Only M17A1 or M17A2 masks are authorized for use.

(2) M24 Series Masks. M24 series chemical-biological aircraft masks will be replaced by the M43 series chemical-biological aircraft mask. There are two types of M43 aircraft masks. The right lens on Type I masks has a notch that enables use of the helmet display unit (HDU) in the Apache helicopter. Pilots of other aircraft will have spherical lenses in their facepiece (Type II).

(3) M25A1 Masks. M25A1 chemical-biological tankers masks will be replaced by the M42 series chemical-biological tankers masks.

(4) M9 Series Masks. M9 series special purpose (SP) masks, authorized for use by explosive ordnance disposal (EOD) personnel, will be replaced by M40SP masks.

d. Filters. A suitable set of filter elements and canisters will be installed for training. Filter elements and canisters that are unserviceable because of shelf-life expiration (Supply Bulletin (SB) 3-30-2 and updates) are suitable for training. SB 3-30-2 and update messages refer to serviceability of filter elements and canisters. Unserviceable filter elements and canisters will be disposed of according to appendix D.

e. Hoods. Hoods should be inspected regularly for deterioration and serviceability according to the applicable mask TM. Unserviceable hoods may be mounted on a mask only for training use. These hoods will marked with a visible blue dot on the lower rear panel of the hood. A serviceable hood may be installed on the mask, instead of a training hood, if required by the unit's mission.

f. Mark-I Nerve Agent Antidote Kit.

(1) The Mark-I (MK-I) nerve agent antidote kit (NAAK) contains 2-pam chloride and atropine. The potency period is 5 years (extendable) from the date of manufacture. Requisitions for replacements require justifi-cation for loss or use.

(2) The MK-I NAAK will be stored at unit level in a secure place and controlled to ensure it is not misused. The storage area must be between 50 to 86 degrees Fahrenheit (^{o}F) (10 to 30 degrees centigrade (^{o}C)). The MK-I NAAK will not be refrigerated.

g. Nerve Agent Pyridostigmine Pretreatment Tablet Set.

(1) The nerve agent pyridostigmine pretreatment (NAPP) tablet set contains the pretreatment medication pyridostigmine bromide (PB) and is used before exposure to nerve agents. The NAPP tablet set consists of 30 milligram (mg) PB tablets (21 total) packaged on a blister pack. Each NAPP tablet set contains enough tablets for one individual for 7 days.

(2) The NAPP set will be stored at unit level in a refrigerated container between 35 to 46 ^{o}F (2 to 8 ^{o}C). The NAPP set will be locked in a secure place and controlled to ensure it is not misused. The potency of tablets will be reduced if they are not refrigerated. If tablets are not refrigerated for a cumulative total of 6 months, it should be assumed that they have lost potency.

h. Convulsive Anti-Nerve-Agent.

(1) The convulsive anti-nerve-agent (CANA) is used in addition to the Mark I antidote to prevent convulsions in moderate to severe nerve agent poisoning. The CANA autoinjector consists of a hard plastic tube containing 10 mg (2 milliliter (ml)) of diazepam in a nonaqueous solution. The container is a light-gray plastic and is labeled with black-letter directions. Later versions of CANA will have flanges to distinguish it from the Mark I.

(2) CANA is a controlled medical item (narcotic) and must be stored in safes or vaults according to AR 190-5 and AR 40-61.

6. DETECTION AND WARNING MATERIEL

a. Alarm, Chemical Agent, Automatic, M8A1. The main components of the M8A1 are the M43A1 chemical agent detector and the M42 alarm. The M43A1 contains a radioactive Americium 241 (Am 241) source in the cell module. The Nuclear Regulatory Commission (NRC) requires each cell module be wipe tested every 3 years. Wipe tests are reported under the Controlled Radioactive Inventory Serialization Program (CRISP) (USAREUR Reg 700-15) and are performed by supporting test measurement and diagnostic equipment (TMDE) team. Repair, disposi-tion, and storage will be according to NRC license and the applicable operator TM.

b. Chemical Agent Monitor. The major components of the chemical agent monitor (CAM) are the carrying case assembly and the monitor. The NRC requires the CAM be wipe tested annually. Wipe tests are performed by direct support (DS) units. Wipe tests are reported under the CRISP Program (USAREUR Regulation 700-15). Repair, disposition, and storage of the CAM will be done according to the NRC license and applicable operators TMs.

c. Detector Kit, Chemical Agent, M256A1. The M256A1 is a Type I (nonexpendable) shelf-life item having a shelf life of 60 months. The M256A1 will not be used for training.

d. Detector Kit, Chemical Agent, ABC-M18A2. The ABC-M18A2 is a Type I (nonexpendable) shelf-life item with a shelf life of 36 months.

e. Detector Paper.

(1) M8 Detector Paper. M8 paper has no shelf life and no special disposition instructions.

(2) M9 Detector Paper. M9 paper is a Type I (non-extendable) item with a shelf life of 36 months.

f. Water Test Kit, Chemical Agent, M272. The M272 is a Type I (nonexpendable) shelf-life item having a shelf life of 60 months.

g. Sampling Kit, CBR Agent, M34. The M34 is a Type I (nonexpendable) shelf-life item having a shelf life of 60 months.

h. Radiation Detection, Identification, and Computation Set AN/VDR-2. The AN/VDR-2 displays dose rates and the total accumulated dose resulting from a fallout field. The AN/VDR-2 consists of a radiation detection, identification, and computation (RADIAC) probe, DT-616/VDR-2, RADIAC meter IM-243/VDR-2, and a pouch with strap.

i. IM-174/PD Series Survey Meters. These meters display dose rates resulting from a fallout field. Unserviceable IM-174s will be turned in to the servicing TMDE team for classification or repair. After classification as nonreparable, meters will be turned in through supply channels.

j. AN/PDR-27 Series RADIAC Set. The AN/PDR-27 series consists of a carrying case, RADIAC meter IM-141, test sample MX7338, headset, and spare electron tubes. Unserviceable MX7338 radioactive test sets must be disposed of according to USAREUR Regulation 385-12 (app D).

k. Dosimeters. The IM-9E/PD (laboratory use only), and IM-93/UD and IM-147/PD (field use) dosimeters are used to detect and measure cumulative exposure to short duration high or low intensity X-ray and gamma radiation using an ionization chamber. Unserviceable RADIAC dosimeters will be turned in to the servicing TMDE for classification or repair. After classification as nonreparable, dosimeters will be turned in through supply channels.

l. AN/PDR-75 RADIAC System. This system consists of the DT-236 dosimeter and the CP-696 reader. The DT-236 dosimeter passively accumulates militarily significant nuclear radiation to which it is exposed. The CP-696 reader actively, but nondestructively, reads the dose accumulated by the DT-236. The DT-236 cannot be read without the CP-696 reader.

m. AN/PDR-56. The AN/PDR-56 consists of a carrying case, radiac probe, electrical headset, probe handle extension, and probe subassembly for field use in the detection and measurement of alpha radiation. The AN/PDR-56 is used to monitor terrain, personnel, and equipment for alpha radiation contamination.

n. AN/PDR-60. The AN/PDR-60 consists of a carrying case, RADIAC meter IM-170, probe DT-243 (alpha detector), probe DT-236 (gamma detector), detector cable, and electrical headset. The AN/PDR-60 detects high- level gamma radiation and is capable of performing alpha monitoring and plutonium gamma detection. The AN/PDR-60 is an authorized substitute for the AN/PDR-56.

o. NBC Contamination Marking Set, M274. The M274 consists of a carrying case to hold individual parts, 20 white flags for marking nuclear contamination, 20 blue flags for marking biological contamination, and 20 yellow flags for marking chemical contamination. Thirteen rolls of yellow marking ribbon are used to provide a way to hang flags between poles or other objects. Forty-eight stakes are used to make poles for hanging flags and attaching marking ribbon. The crayon markers supplied with the M274 should be replaced with china marking pencils. The china marking pencils have proven to be more effective for writing on flags. China markers are to be stored in the stake case at the bottom of the container.

7. DECONTAMINATION MATERIEL

a. ABC M11, Portable Decontamination Apparatus, DS2, 1½ Quart. The ABC M11 consists of a refillable, cylindrical container with a removable spray head. The ABC M11 is pressurized using nitrogen cylinders. Local commanders may store mounting brackets with the empty apparatus or install them on assigned vehicles.

b. M13 Decontaminating Apparatus, Portable, 14 Liter. The M13 decontaminating apparatus, portable (DAP) consists of a filled decontaminating agent (DS2) container, manual pump, hose, two wand sections, an attachable brush, and an accessory container that holds the components when they are not in use. The M13 DAP must be stored according to requirements for the storage of DS2.

c. Decontaminating Solution Number 2. DS2 is packaged in 1 1/3-quart cans, 5-gallon pails, and in M13 DAP fluid containers. The 5-gallon pail is an authorized substitute for the 1 1/3-quart can. DS2 is stable indefinitely and has unlimited shelf life if in original, undamaged containers. DS2 should be stored in a dry area to prevent containers from rusting. DS2 is effective for about 48 hours after being exposed to air. DS2 is not used for training.

(1) Container maintenance should be done only on the 5-gallon can and M13 DAP if corrosion is light and easily removed. If the corrosion is severe, or if there is any doubt that the rust can be removed safely, personnel will not attempt to perform container maintenance. Personnel must wear chemical protective clothing, gloves, and protective mask when handling leaking containers, DS2 vapors are present, or whenever direct contact with DS2 is possible. The M2 TAP apron should be used, if available. Painted surfaces will be checked for chipped or cracked paint and for rust. Personnel should remove rust with steel wool (NSN 5350-00-242-4403), then apply primer coating (NSN 8010-00-082-1714) and spot paint (NSN 8010-01-128-6958). The M13 DAP operators TM gives proper procedures.

(2) Units will inspect DS2 containers monthly. TM 3-4230-214-12&P will be used as a guide for inspecting the M13 DAP and the replacement fluid container. The guidance below will be used for inspecting the 1 1/3-quart can and the 5-gallon can.

(a) 1 1/3-Quart Cans. The cans are packed 12 each in a wirebound, wooden box. If the box shows signs of stains, this is an indication that the cans are leaking in the box. Personnel should—

1. Open the box carefully and avoid turning it upside down.

2. Remove and inspect each 1 1/3-quart can for rust. The slightest sign of corrosion is an indication that this can is, or soon will be, leaking. Corroded cans are unsuitable for prolonged storage and are unserviceable.

3. Pack corroded cans and turn them in to the local defense reutilization and marketing office (DRMO) according to procedures in appendix D.

WARNING. The 1 1/3-quart can is made of thin metal and attempts to remove rust may cause holes in the can. Personnel will do not attempt to remove rust and spot paint the 1 1/3-quart can.

4. Gently shake each can to determine whether or not DS2 is present (some DS2 may have evaporated if a can has a hole).

5. Examine the can carefully. If there is a paint bubble on the can, remove the bubble and check for a hole. An oily appearance or the presence of moisture also indicates a potential leak. These cans should be disposed of according to appendix D.

(b) 5-Gallon Cans. Containers with slight or small areas of corrosion should be spot painted. Identification and other markings on the cans will not be destroyed.

(c) Disposal of Cans. Personnel should dispose of cans when they meet one or more of the conditions below. Cans should be disposed of when—

1. They are leaking.

2. They are heavily corroded, other than stage I corrosion (see note 2).

3. They are damaged or heavily dented.

4. They have rust on more than a third of the paint coating.

5. The cap of the container is completely covered by corrosion.

6. The cap cannot be unscrewed by hand or where tool marks are visible indicating the cap was unscrewed with force.

7. There is moisture, dampness, or an oily appearance around the seams or cap.

NOTE 1. The seams on the cans and nozzle or spout are usually the first to rust. The can is not vapor proof. DS2 vapors adhere to the paint and soften it, which eventually leads to corrosion of the underlying metal.

NOTE 2. Corrosion stage I is indicated by red, black, or white corrosion deposits on the surface accompanied by minor etching and pitting. Base metal is sound. This corrosion can be removed and the underlying metal spot painted. Corrosion stage II is indicated by a powdered granular or scaled condition, resulting in erosion of metal from the surface of the can. Personnel will not attempt to remove stage II corrosion. Cans should be packed and turned in to the DRMO for disposal according to appendix D.

d. Super Tropical Bleach Decontaminating Agent. Super tropical bleach (STB) is a mixture of chlorinated lime and calcium oxide in white powder form. STB will be stored in a dry area to prevent containers from rusting. STB has an extendable shelf life. The manufacturer's name, date of manufacture, and lot number should be provided 6 months before expiration to the Directorate for Bulk Fuels, Quality Surveillance Branch, 200th MMC (TA), (494-6005/7312).

e. M291 Decontamination Kit. The M291 consists of a carrying pouch containing six identical foil packets. The M291 is used for decontamination of individual equipment. The packets and contents are nontoxic and are used for training and actual decontamination. The M291 is a type II (extendable) shelf-life item having a shelf life of 60 months.

f. M258A1 Decontaminating Kit. The M258A1 is an authorized substitute for the M291. The M258A1 is a type II (extendable) shelf life-item having a shelf life of 60 months.

g. Decontaminating Kit Individual Equipment, M280. M280 decontaminating kit individual equipment (DKIE) contains 20 decontaminating packets. The M280 DKIE has no shelf life.

h. Decontaminating Apparatus, Power Driven, M17 (LDS). The M17 consists of an air-cooled, two-cycle gasoline engine, heat exchanger, water pump, a 1,580 gallon collapsible water tank with cover, and accessories.

i. Power Driven, Decontaminating Apparatus, Skid-Mounted, M12A1. The M12A1 Power Driven, Decontaminating Apparatus (PDDA) is the primary item of equipment in chemical decontamination units. The M12A1 consists of a pump unit, a 500-gallon tank, and an M2 water heater.

j. European Fire Fighting Equipment. European fire fighting equipment (FFE) is a USAREUR initiative to upgrade the decontaminating capability of units in Europe. The equipment allows access to water from German fire hydrants and is available in three configurations—

(1) Company-Level Set. This set provides a lightweight and easily transportable means to wash off gross contamination and to rinse vehicles and equipment after the application of DS2.

(2) M12A1 PDDA Set. This set provides the equipment necessary to make M12A1 hoses and coupling compatible with European fire hydrants.

(3) 65-GPM Pump Set. This set provides the capability for one 65-GPM pump to operate from either an aboveground or underground fire hydrant when additional water pressure is required.

8. COLLECTIVE PROTECTION EQUIPMENT

a. Filter Unit, Gas Particulate, ABC-M6A1. The ABC-M6A1 supplies pressurized, filtered air to a protective shelter for about 50 individuals. The ABC-M6A1 can be installed either outside or inside a shelter. The ABC-M6A1 requires two M10 gas filters and two M9A1 particulate filters. There are two versions of the ABC-M6A1, the gasoline engine driven (GED) and the electric motor driven (EMD).

b. Simplified Collective Protection Equipment, M20. M20 simplified collective protection equipment (SCPE) provides a radioactive particle, chemical, and biological contaminant-free work and rest area for up to 10 persons. M20 SCPE consists of a protective entrance (PE), filter canister, a support kit, and a room-liner package. SCPE should be used in a structurally sound building. The room liner must not be subjected to wind, rain, direct sunlight, or direct contact with liquid agents.

c. Shelter System, Collective Protection, CB: Inflatable, Trailer Transported, M51. The M51 shelter system is a transportable, pressurized enclosure consisting of an inflatable shelter, an inflatable PE, and the M68 filter and utilities unit. A rear-wall section of the shelter can be removed so that two M51 shelters can be linked together. Each shelter, when inflated and pressurized, is capable of protecting up to 10 persons.

d. Collective Protection Equipment, Chemical, Biological, and Radiological, Battery Control Central, Hawk, M10. M10 collective protection equipment (CPE) consists of an M18 gas particulate filter unit (GPFU); an M7 PE, and an M43 PE shipping and storage container. Battery control central (BCC) components that contribute to the operation of the GPFU include an air conditioner, an antibackdraft valve, and a control box. Two M23 gas filters and two M24 particulate filters are required.

e. Modular CPE. The modular concept provides CPE that can be applied to various end items (for example, vehicles, vans, shelters) rather than CPE designed for a specific system, (M10 CPE for the Hawk BCC). Basic components of modular CPE are the PE, GPFU, and an installation kit. Other components include a PE control module, airflow valve/silencer, power distribution unit, and compartment control module. The specific modular CPE items used depend on the end item in which they are installed. Table 2 shows modular CPE applications.

f. GPFUs. Various types of small GPFUs provide contaminant-free air to occupants of combat vehicles and to hospital patients. Basic GPFU components are a filter housing, particulate filters and gas filters, and hoses. The M13A1 system also has M3 individual air heaters in line with the hoses. Table 3 shows GPFU vehicle and hospital patient applications.

g. Tester, Air Flow, M39. This tester is used to measure the filtered air flow at each mask outlet for M7A1, M8 series, M13 series, and M14 GPFUs. The tester is authorized at organizational, DS, and general support (GS) levels. The M39 requires calibration by TMDE team every 360 days (TB 43-180).

9. SMOKE AND FLAME

a. Carrier, Smoke Generator, M1059. The M1059 consists of an M157 smoke-generator set mounted on a modified M113-series armored personnel carrier (APC). The M1059 provides mobile, large area smoke, in support of tactical operations. The M1059 can provide continuous smoke for 1 hour without refueling.

b. Generator, Set, Smoke, Mechanical, Pulse Jet, M157. The M157 smoke generator set consists of two M545 smoke generators, a control panel, air compressor assembly, fog oil pump assembly, and a 120-gallon fog oil tank. The set will produce smoke from both stationary and moving vehicles (high-mobility multipurpose wheeled vehicles). The M157 can provide continuous smoke for 2 hours without refuling.

c. Generator, Smoke, Mechanical, Pulse Jet, M3A4. The M3A4 smoke generator provides large area smoke and can be operated on the ground or from a stationary truck, trailer, boat, or other level base. The M3A4 produces smoke for about 1 hour without refueling.

d. Smoke Pots. Smoke pots are used to generate screening smoke for tactical operations such as river crossings. Smoke pots do not provide the large area capability of smoke generators and are most effective when used with smoke generators. Table 4 shows the types of smoke pots available.

e. Smoke Generator Fuel Number 2. Smoke generator fuel number 2 (SGF2) or fog oil is an ordinary, low viscosity (comparable to SAE 10 motor oil) petroleum oil. Fog oil has an extendable shelf life. The drum is marked with the date of packaging or date of manufacture. The manufacturer's name, date of manufacture, and lot number should be provided 6 months before expiration to the Director for Bulk Fuels, Quality Surveillance Branch, 200th MMC (TA), (494-6005/7312).

f. M9A1-7 Flame Thrower, Portable. The M9A1-7 dispenses thickened fuel up to a range of 50 meters and unthickened fuel up to 25 meters. It consists of an M9A1 tank group, M8 hose group, and M7 gun group.

g. Vehicle Engine Exhaust Smoke System. The vehicle engine exhaust smoke system (VEESS) is mounted on M1-series tanks. VEESS uses pressure from the engine fuel pump to inject fuel into the hot engine exhaust system. The fuel flash-vaporizes, goes with exhaust gases into the atmosphere, and produces a dense, billowing, white smoke cloud. JP8 fuel is not effective in the VEESS.

h. Launchers, Grenade, Smoke, Screening. Three types of launchers are currently used. M176 launchers fire AN-M8 hydrogen chloride (HC) and M34 white phosphorous (WP) grenades. M226 launchers fire HC. M239 launchers fire L8A1 RP and M76 IR grenades.

i. Flame Fuels. Fuels ranging from mogas to diesel fuels can be used after combining them with a thickening agent (M4 thickener). Most flame-fuel weapons or devices are best employed using metal containers, 5- to 55-gallon capacity, and various types of ignition devices.

Table 2
Modular CPE Applications

System	PE	GPFU	Installation Kit	Filters Per GPFU
AN/GSG-10 FDC (TACFIRE) TM 3-4240-284-20&P	M10	M56	M262	Filter set, gas & part (1)
TACFIRE UCE TM 3-4240-308-20&P		M59	M277	Filter set, gas & part (2)
AN/TSQ-73 ADA C2 System TM 3-4240-286-20&P	M12	M56	M263	Filter set, gas & part (1)
Patriot CRG/ECS/CCG TM 3-4240-285-20&P	M14	M59	M265	Filter set, gas & part (2)
Improved Hawk TM 3-4240-310-20&P	M14	M84		Filter set, gas & part (1)
Guardrail TM 3-4240-309-20&P	M10(2)	M87(4)	M5SFC(4)	Filter set, gas & part (2)
Trailblazer TM 3-4240-311-20&P	M13	M56		Filter set, gas & part (1)
Regency Net TM 3-4240-315-20&P		M93		M48 filter, gas & part (1)

NOTE. M56 and M84 GPFUs each require one filter set, gas and particulate. The M59 and M87 GPFUs each require two filter sets. Gas filters are requisitioned as part of a filter set that includes one gas filter and one particulate filter. The particulate filter may be requisitioned separately (app B gives national stock numbers).

Table 3
GPFU Application

System	GPFU	Air Purifier	Precleaner and Particulate Filter Assembly	Installation Kit	Filter Gas	Filter Particulate
M1A1 Tank, Primary					M48 (2)	
M1A1 Tank, Backup						M1 Tank
M60 Series tank						
M2/3 Series IFV/CFV	M13A1		M1A1-19	M29A1	M18 (2)	M19
M728 CEV						
MLRS						
FIST V						
M1010 Ambulance						
M9 ACE	M8A3	M2A2			M12A1	M13
AVLB						
M88A1 Recovery Vehicle						
M578 Recovery Vehicle	M8A3 (2)	M2A2 (2)			M12A1 (2)	M13 (2)
FAASV						
M113 Ambulance	M14	M2A2			M12A1	M13
Hospital, Six-Person	M7A1	M2A2			M12A1	M13

Table 4
Types of Smoke Pots

Model	Filler	Burn Time
M4A2 (floating)	HC	10 to 15 minutes
M7A1 (floating)	SGF2	8 to 13 minutes
M1 (10 pound)	HC	5 to 8 minutes
M5 (30 pound)	HC	12 to 22 minutes

10. HAZARD CALCULATION MATERIEL

a. M5A2 Fallout Predictor. The M5A2 is a transparent device used to outline zones of hazard resulting from nuclear surface bursts for selected nuclear yield groups.

b. Calculator Set, RADIAC and Nuclear Yield, M28A1. The M28A1 consists of—

(1) RADIAC Calculator, M1A1. The M1A1 is used as a fast means of calculating radiation hazards from a nuclear burst.

(2) Nuclear Yield Calculator, M4A1. The M4A1 is used as a fast means of calculating nuclear yield from a nuclear burst.

(3) Fallout Prediction Plotting Scale, ML-556/UM. The ML-556/UM is a plastic device used to plot wind vectors directly from field artillery or air weather service upper-air wind data.

11. RIOT CONTROL DISPERSERS AND AGENTS

a. M5 Riot Control Agent Disperser. The M5 is used to disperse riot-control agents from low-flying helicopters or moving ground vehicles. Container tanks hold about 108 pounds of CS1 or 137 pounds of talc powder. The AN-M4 compressor and the M27 service kit are required to service the M5 disperser.

b. M33A1 Portable Riot Control Agent Disperser. The M33A1 can be filled with 3 gallons of CR solution or 8 pounds of dry CS1. The AN-M4 compressor and the M254 service kit are required to service the M33A1 dis-perser.

NOTE. Storage of riot control agents will be according to TM 9-1300-206 and applicable regulations. The servicing ammunition surveillance office will provide disposition instructions. Further assistance will be provided by the Director for Missiles and Munitions, 200th MMC (TA), (AEAGD-MMC-VQ) (494-6565).

c. Riot Control Agent, CR Solution. CR solution is a clear-liquid riot-control agent. It is stored, shipped, and issued in a 3-gallon metal pail. CR immediately and severely stings the skin, eyes, nose, and throat. Prolonged exposure may make the skin very sensitive for hours or days when rubbed or washed. CR is persistent in the en-vironment and on clothes since it is not broken down by water.

NOTE. CR is the code name for chloroacetophenone.

d. Riot Control Agent, CS1. CS1 is a fine micro-pulverized mixture of about 95 percent CS and 5 percent silica aerogel. CS1 immediately and severely stings the skin, eyes, nose, and throat. Symptoms are redness of the skin, tears, runny nose, coughing, and tightness of the chest. Incapacitating dosages lose their effects in 5 to 10 minutes.

NOTE. CS is the code name for orthochlorobenzylidene malononitrile.

e. Riot Control Agent, CS2. CS2 is a mixture of 93 to 96 percent CS and 4 to 7 percent treated silica. The mixture provides improved flow of the agent during pouring and dispersing. CS2 is also water repellant, which prolongs its effectiveness. When dispersed, the powder agent settles and readily infiltrates terrain, vegetation, personnel, and equipment. It also floats on water. When disturbed, it aerosolizes to cause the designed incapacitating effects. Effectiveness on open terrain under normal weather conditions lasts about 30 days. The effects, symptoms, and duration of effects are similar to CS1.

NOTE. Use of riot control agents in local training areas (LTA) must be coordinated and approved.

12. TRAINING MATERIEL

a. CPO, Training.

(1) At least one training CPO will be available for each individual in the unit. Only unserviceable BDOs may be used for training.

(2) Training CPOs and BDOs may be laundered either at home or in field, post, or commercial laundries.

(3) Training overgarments can be obtained from DRMOs, if available.

b. Training Chemical Protective Gloves, Overboots, and Mask Hoods. Unserviceable items should be retained for training use, as needed. Central issue facility (CIF)-issued GVOs may be used for training. Training items, except the GVO, should be marked with a visible blue dot.

c. M58A1 Skin Decontamination Training Aid. The M58A1 training aid is used to train soldiers in the proper use of the M258A1 skin decontamination kit. The M58A1 will not be used to decontaminate toxic agents. Each kit contains sufficient wipes to do three complete training skin decontaminations. The M58A1 refill kit contains 30 replacement decontamination-1 and decontamination-2 packets. For training purposes, the M58A1 may be carried in place of the M291 or the M258A1.

d. M256 Training Kit. The M256 training kit is used for training soldiers in the proper use of the M256A1 detector kit. The training kit contains an assortment of 36 samples that will simulate nerve, mustard, phosgene oxime, blood agent, and "all clear" responses. The training kit uses samples and detectors that are identical in appearance to the M256A1 except they are coded numerically and colored blue to designate training items.

e. Simulator, Detector Unit, Chemical Agent Automatic Alarm, M81. The M81 is used to simulate a moving chemical-agent cloud by causing detectors to alarm individually or in groups using electrical signals. The receivers and transmitters are part of a set and will only operate as sets; therefore, mixed units will not work together. The M81 transit case contains four receivers, one transmitter, and other items required for operation. The M81 has an operating range of 1,000 meters, which is decreased by dense vegetation, uneven terrain, or heavy rain. Unit personnel may obtain M81 on a hand receipt from servicing training aid support centers (TASCs). TM 3-6665-312-12&P provides additional information.

f. M13 Decontamination Trainer. The M13 trainer is used for training instead of the M13 DAP and is part of the additional authorization list (AAL). The M13 trainer is authorized by CTA 50-970. Use of this container will eliminate rust problems associated with the M13 DAP.

g. Chemical Agent Stimulant, Polyethylene Glycol (PEG 200). Polyethylene glycol (PEG 200) is available in bulk form for use in training as a persistent chemical agent stimulant. PEG 200 may be used undiluted or in CAST 1 form (90 percent PEG 200, 10 percent water (by weight)). Further dilution will impair reaction time with M8 paper. PEG 200 should not be mixed with other stimulants. Chemical agent CS will not be used with PEG 200. PEG 200 will not cause the M8A1 alarm or components of detector kits other than the M8 paper to react.

NOTE. Use of PEG 200 in LTAs must be coordinated and approved.

h. M9 Simulator, Projectile, Airburst, Liquid. The M9 simulator, projectile, airburst, liquid (SPAL) is a chemical-ammunition training device. A complete SPAL system consists of 21 liters of chemical agent stimulant (PEG 200), 20 projectile assemblies (plastic bottles), 20 actuating charges with accessories, and a copy of TM 3-1370-100-12. SPAL is launched vertically to a height of 12 to 20 meters. When the SPAL bursts, a liquid stimulant is dispersed in droplets covering an area about 50 meters wide and 50 to 100 meters downwind from the point of the burst.

i. M267 Launcher, Projectile, Liquid Airburst. The M267 is a portable launcher capable of producing a stimulated contamination area 75 meters wide by 75 meters long, depending on wind velocity. The M267 fires five SPALs.

j. MK-I Injector Training Device, DVC-T8-25. The MK-I device trains individuals to inject themselves with the MK-I NAAK. It simulates the actual injector in size, weight, and design, except it uses a plastic prod instead of a hypodermic needle and has a blue label instead of a green or tan label. Fifty cocking tools and 12 instruction cards are included with each 50 devices packed. These items are requisitioned through TASCs.

k. Large Area RADIAC Trainer, AN/TDQ-II. The AN/TDQ-II is used to train RADIAC survey personnel in detecting, monitoring, and surveying radioactive fallout without actually exposing them to radioactive material. The AN/TDQ-II is available through TASCs.

l. Aerial Radiological Survey Set. This set provides personnel with classroom training practice to maintain proficiency in the techniques of conducting an aerial radiological survey without the need for aircraft, terrain, or radiation. It is available through TASCs.

m. NBC Equipment Bag. The NBC equipment bag is used to consolidate and transport the CPO, chemical protective gloves, and chemical protective boots.

APPENDIX A
REFERENCES

AR 32-4, Special Measurement Clothing and Footwear, Orthopedic Footwear, Guidons, Streamers and Flags.

AR 40-61, Medical Logistics Policies and Procedures.

AR 71-13, The Department of the Army Equipment Authorization and Usage Program.

AR 350-42, Nuclear, Biological, and Chemical Defense and Chemical Warfare Training.

AR 385-11, Ionizing Radiation Protection (Licensing, Control, Transportation, Disposal, and Radiation Safety).

AR 710-2, Supply Policy Below the Wholesale Level.

DA Pamphlet 350-9, Index and Description of Army Training Devices.

DA Pamphlet 710-2-2, Supply Support Activity Supply System: Manual Procedures.

DA Pamphlet 738-750, Functional Users Manual for the Army Maintenance Management System (TAMMS).

Common Table of Allowance (CTA) 8-100, Army Medical Department Expendable/Durable Items.

CTA 50-900, Clothing and Individual Equipment.

CTA 50-909, Field and Garrison Furnishings and Equipment.

CTA 50-970, Expendable/Durable Items (Except: Medical, Class V, Repair Parts, and Heraldic Items).

Field Manual (FM) 3-3, NBC Contamination Avoidance.

FM 3-4, NBC Protection.

FM 3-4-1, Fixed Site Protection.

FM 3-5, NBC Decontamination.

FM 3-6, Field Behavior of NBC Agents.

FM 3-7, NBC Handbook.

FM 3-9, Potential Military Chemical/Biological Agents and Compounds.

FM 3-11, Flame Field Expedients.

FM 3-21, Chemical Accident Contamination Control.

FM 3-50, Smoke Operations.

FM 3-100, NBC Defense, Chemical Warfare, Smoke, and Flame Operations.

FM 3-101, Chemical Staffs and Units.

FM 5-25, Explosives and Demolitions.

FM 8-9, NATO Handbook on the Medical Aspects of NBC Defensive Operations.

Supply Bulletin (SB) 3-30-2, Chemical-Biological Canisters and Filter Elements: Serviceability Lists.

SB 10-523, Size Tariff for Clothing, Equipage, and Footwear.

SB 710-1-1, Standard Study Numbering System and Replacement Factors.

Technical Bulletin (TB) 740-10, Quality Control Depot Serviceability Standards.

TB 750-25, Maintenance of Supplies and Equipment: Army Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Repair Support Program.

USAREUR Regulation 200-1, USAREUR Environmental Program.

USAREUR Regulation 385-11, USAREUR Explosive Safety Standards.

USAREUR Regulation 700-15, Controlled Radioactive Inventory Serialization Program (CRISP).

USAREUR Regulation 710-2, Supply Policy Below the Wholesale Level.

7th Army Theater Command Trainers Guide to the USAREUR Training Support System, Training Support Activity Europe.

Nuclear Regulatory Commission (NRC) License 12-00722-13, M43A1 Chemical Agent Detector.

NRC License 12-00722-14, Chemical Agent Monitor.

USAREUR Radioactive Material Control Point (RMCP) Standing Operating Procedures (SOP).

APPENDIX B
NUCLEAR, BIOLOGICAL, CHEMICAL DEFENSE EQUIPMENT AUTHORIZED FOR USAREUR UNITS

Table B-1 lists nuclear, biological, chemical (NBC) defense equipment authorized for USAREUR units.

Table B-1
NBC Defense Equipment Authorized for USAREUR Units

ITEM NSN/LIN	AUTHORIZATION (EXPENDABLE CODE)	SUPPLY CLASS/FUNDING	BASIS OF ISSUE	REFERENCES
Individual Protection Materiel				
Suit, Chemical Protective (Battle Dress Overgarment (BDO)) 8415-01-137-1700 XXXS 8415-01-137-1701 XXS 8415-01-137-1702 XS 8415-01-137-1703 S 8415-01-137-1704 M 8415-01-137-1705 L 8415-01-137-1706 XL 8415-01-137-1707 XXL/U57960	CTA 50-900 Nonexpendable (N)	II/SF	Per CTA and this reg	TM 10-277 FM 3-4
Suit, Chemical Protective (CPO) 8415-01-070-1880 XXXS 8415-01-070-1879 XXS 8415-00-407-1060 XS 8415-00-177-5007 S 8415-00-177-5008 M 8415-00-407-1062 L 8415-00-407-1063 XL 8415-00-407-1064 XXL/U57960	CTA 50-900 (N)	II/SF	Per CTA and this reg	TM 10-277 FM 3-4
Apron, TAP, M2 8415-00-281-7813 S 8415-00-281-7814 M 8415-00-281-7815 L 8415-00-281-7816 XL/A87412	CTA 50-900 (N)	II/SF	Per CTA	TM 10-277
Glove Set, Chemical Protective 8415-01-144-1862 XS 8415-01-033-3517 S 8415-01-033-3518 M 8415-01-033-3519 L 8415-01-033-3520 XL	CTA 50-970 Expendable (X)	II/SF	Per CTA plus 1 training	TM 10-277
Glove Liner, White Cotton 8415-00-268-8354 XS, S 8415-00-268-8353 M, L, XL	CTA 50-970 (X)	II/SF	Per CTA	TM 10-277
Green Vinyl Overboots 8430-01-048-6305/Size 3 8430-01-048-6306/Size 4 8430-01-049-0878/Size 5 8430-01-049-0879/Size 6 8430-01-049-0880/Size 7 8430-01-049-0881/Size 8 8430-01-049-0882/Size 9 8430-01-049-0883/Size 10 8430-01-049-0884/Size 11 8430-01-049-0885/Size 12 8430-01-049-0886/Size 13 8430-01-049-0887/Size 14/N39848	CTA 50-900 and this reg (N)	II/SF	2 contingency (CIF issue for training)	this reg

Footwear Covers, Chemical Protective 8430-01-118-8172 S 8430-01-021-5978 L	CTA 50-970 (X)	II/SF	Per CTA	TM 10-277
Cover, Helmet, Chemical 8415-01-111-9028	CTA 50-970 (X)	II/SF	Per CTA and this reg	FM 3-4
Coveralls, TAP, M3 8415-00-099-6962 S 8415-00-099-6968 M 8415-00-099-6970 L/F33220	CTA 50-900 (N)	II/SF	Per CTA	TM 10-277
Boots, TAP, M2A1 8430-00-820-6304/Size 5 8430-00-820-6303/Size 6 8430-00-820-6302/Size 8 8430-00-820-6301/Size 9 8430-00-820-6300/Size 10 8430-00-820-6299/Size 11 8430-00-820-6298/Size 12 8430-00-820-6297/Size 13 8430-00-820-6296/Size 14 8430-00-820-6295/Size 15/C08804	CTA 50-900 (N)	II/SF	Per CTA	TM 10-277
Gloves, TAP 8415-00-753-6550 XS 8415-00-753-6551 S 8415-00-753-6552 M 8415-00-753-6553 L/J70393	CTA 50-900 (N)	II/SF	Per CTA	TM 10-277
Mask, CB, Field, M17A1/M17A2 (N) TM 3-4240-279-20&P 4240-01-106-0485/4240-01-143-2017 XS (5%) 4240-00-926-4199/4240-01-143-2018 S (43%) 4240-00-926-4201/4240-01-143-2019 M (47%) 4240-00-926-4200/4240-01-143-2020 L (5%)/M11895	MTOE/TDA	VII/PA	MTOE/TDA	TM 3-4240-279-10
Filter Elements, M13A2 4240-00-165-5026	See ref (X)	IX/SF	2 contingency 1	TM 3-4240-279-20&P
Hood, CB Mask, Field M6A2 4240-00-999-0420	CTA 50-970 (X)	II/SF	Per CTA plus 1 training	TM 3-4240-279-10 TM 3-4240-279-20&P
Mask, CB, Field: M40 4240-01-258-0061 S (20%) 4040-01-258-0062 M (60%) 4240-01-258-0063 L (20%)/M12418	MTOE/TDA (N)	VII/TDA	MTOE/TDA	TM 3-2420-300-10-1
Canister, Chem-Bio, C2 4240-01-119-2315	See ref (X)	IX/SF	2 contingency 1 training	TM 3-4240-300-10-1/2 TM 3-4240-300-20&P
Hood, Chem-Bio 4240-01-260-8723	See ref (X)	IX/SF	2 contingency (M40/42 mask) 1 training	TM 3-4240-300-10-1/2 TM 3-4240-300-20&P
Mask, CB, Aircraft: M24	MTOE/TDA	VII/PA	MTOE/TDA	TM 3-4240-280-10

4240-00-808-8799 S (11%) 4240-00-776-4384 M (78%) 4240-00-808-8798 L (11%)/M11621	(N)		plus	TM 3-4240-280-23&P
Hood, CB Mask, Aircraft, M7 4240-00-021-8695	CTA 50-970 (X)	II/SF	Per CTA plus 1 training	TM 3-4240-280-10
Mask, CB, Aircraft: M43 Type 1 4240-01-208-6966 S (11%) 4240-01-208-6967 M (55%) 4240-01-208-6968 L (27%) 4240-01-208-6969 XL (7%)/M12350 Type II 4240-01-265-2677 S (11%) 4240-01-265-2679 M (55%) 4240-01-265-2678 L (27%) 4240-01-265-2680 XL (7%)/M12350	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4240-312-12&P
Mask, CB, Tank: M25A1 4240-00-994-8751 S (11%) 4240-00-994-8750 M (78%) 4240-00-994-8752 L (11%)/M10936	MTOE/TDA (N)	VII/PA	MTOE/TDA	TM 3-4240-280-10 TM 3-4240-280-23&P
Canister, M10A1 4240-00-127-7186	See ref (X)	IX/SF	2 contingency 1 training	TM 3-4240-280-10
Filter, Canister Insert (for M10A1 Canister) 4240-01-177-2675	See ref (X)	IX/SF	1 per M10A1	TM 3-4240-280-2041
Hood, Mask, Tank, M5 4240-00-860-8987	CTA 50-970 (X)	II/SF	Per CTA plus 1 training	TM 3-4240-280-10
Mask, CB, Combat Vehicle: M42 4240-01-258-0064 S (20%) 4240-01-258-0065 M (60%) 4240-01-258-0066 L (20%)/M18526	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4240-300-10-2
Mask, CB, Special Purpose: M9A1 4240-00-369-6097 S/Left cheek canister mount 4240-00-368-6098 S/Right cheek canister mount 4240-00-368-6095 M/Left cheek canister mount 4240-00-368-6096 M/Right cheek canister mount 4240-00-368-6093 L/Left cheek canister mount 4240-00-368-6094 L/Right cheek canister mount/M11689	MTOE/TDA (N)	II/SF	MTOE/TDA	TM 3-4240-204-12&P
Hood, TAP, M3 8415-00-261-6690/K45398	CTA 50-900 (N)	II/SF	Per CTA	TM 3-4240-204-12&P TM 10-277
Canister, M11 4240-00-112-9365	See ref (X)	IX/SF	As required	TM 3-4240-204-12&P

Pad, Insert (M11 canister) 4240-01-127-2333	See ref (X)	IX/SF	As required	TM 3-4240-204-12&P
Clip, Nerve Agent 6530-01-141-7458	See ref (X)	VIII/SF	As required	FM 8-285
Nerve Agent Antidote Kit MK-I, 6505-01-140-6455 6505-01-174-9919	CTA 8-100 (X)	VIII/SF	Per CTA	FM 8-285
Atropine Injector 6505-00-926-9083	CTA 8-100 (X)	VIII/SF	Per CTA	FM 8-285
Prolidoxime Chloride/2ML 6505-01-125-3248	CTA 8-100 (X)	VIII/SF	Per CTA	FM 8-285
Pyridostigmine Bromide (PB) 6505-01-178-7903	CTA 8-100 (X)	VIII/SF	Per CTA	TM 8-285 FC 8-48
Detection and Warning Materiel				
Alarm, Chemical Agent, Auto Manpack, M8A1 6665-01-105-5623/A32355	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-6665-312-12&P
Major Components				
Detector Chemical Agent, M43A1 6665-01-105-5623	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-6665-312-12&P TM 3-6665-312-30&P
Alarm Unit, Chemical Agent, Auto Alarm, M42 6665-00-859-2215/A33120	MTOE/TDA	II/SF	Per MTOE/ TDA	TM 3-6665-312-12&P TM 3-6665-312-30&P
Ancillary Items for (M8A1, M43A1, and M42) Chemical Agent Alarm				
Battery, Dry BA 3030/U 6135-00-930-0030	CTA 50-970 (X)	IX/SF	4 per cml agent alarm	TM 3-6665-312-12&P
Battery, Dry BA 3517/U 6135-00-450-3528	CTA 50-970 (X)	IX/SF	2 per cml agent alarm	TM 3-6665-312-12&P
Maintenance Kit, NBC Equip Chemical Agent Detector, M273 5180-01-108-1729	See ref (X)	II/SF	1 per M8A1	TM 3-6665-312-12&P
Outlet Filter (M8A1) 6665-01-198-3882	See ref (X)	IX/SF	As required	TM 3-6665-312-12&P
Test Set, Chemical Agent Alarm, M140 6665-01-083-2749	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-6665-329-13&P

Chemical Agent Monitor NSN/LIN (LP CAM) 6665-01-199-4153/C05701 CAM NSN TBP	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-6665-327-13&P TM 3-6665-332-13&P TM 3-6665-331-12&P TM 3-6665-331-30&P
Detector Kit, Chemical Agent, M256A1 6665-01-133-4964 M256 6665-01-016-8399	CTA 50-970 (X)	II/SF	Per CTA	TM 3-6665-307-10
Detector Kit, Chemical Agent, M18A2 6665-00-903-4767	CTA 50-970 (X)	II/SF	Per CTA	TM 3-6665-254-12
Paper, Chemical Agent Detector M8, 6665-00-050-8529 M9, 6665-01-226-5589	CTA 50-970 (X)	II/SF	Per CTA	TM 3-4240-279-10 TM 3-6665-311-10
Water Testing Kit, M272 6665-01-134-0885	CTA 50-970 (X)	II/SF	Per CTA	TM 3-6665-319-10
Sampling Kit, CBR Agent, M34 6665-00-776-8817	CTA 50-970 (X)	II/SF	Per CTA	TM 3-6665-205-10/1 TM 3-6665-205-10/2 TM 3-6665-268-10
RADIAC Set AN/VDR-2 6665-01-222-1425/R20684	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 11-6665-251-10 TM 11-6665-251-20
Installation Kits for AN/VDR-2	TBP (X)	IX/SF		TM 11-6665-362-20&P
RADIAC meter, IM-174A/PD 6665-00-999-5145/Q21483 IM-174B/PD 6665-01-056-7422	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 11-6665-232-12
RADIAC Set, AN/PDR-27 J Model 6665-00-543-1435 P Model 6665-00-975-7222 Q Model 6665-00-017-8903 R Model 6665-00-961-0846 S Model 6665-01-080-4418/Q19339	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 11-6665-209-10 TM 11-6665-224-10 TM 11-6665-249-10
Radioactive Test Set 6665-00-832-6159/Q93782 MX-7338/PDR-27()	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-6665-264-10
RADIAC meter, IM-9E/PD 6665-00-243-8199/Q20798	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 11-6665-214-10

RADIAC meter, IM-93A/UD 6665-00-752-7759/Q20935	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 11-6665-214-10
RADIAC meter, IM-147 6665-00-542-0729/Q21209	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 11-6665-214-10
RADIAC Detector Charger PP1578A/PD 6665-00-541-1177/E00533	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 11-6665-215-12/1 TB SIG 226-8
NATO Adapter 6665-01-077-2986	CTA 50-970 (X)	IX/SF	Per CTA	TM 11-6665-215-12/P
RADIAC Set, AN/PDR 75 6665-01-211-4217/R30925	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 11-6665-236-12 TM 11-6665-236-20P
DT 236 6665-01-043-2191	CTA 50-970 (N)	II/SF	Per CTA	TM 11-6665-236-12
Computer Indicator, RADIAC, CP 696 (Reader) 6665-01-044-3836	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 11-6665-236-12 TM 11-6665-236-20P
RADIAC Set, AN/PDR 56 (F) 6665-00-211-6895/Q19681	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 11-6665-245-12
RADIAC Set, AN/PDR 60 6665-00-965-1516/Q19750	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 11-6665-221-15
NBC Marking Set 9905-12-124-5955	CTA 50-970 (X)	II/SF	Per CTA	TM 3-9905-001-10
China Marking Pencils 7510-00-240-1526	CTA 50-970 (X)	II/SF	As required	This reg
	Decontamination Materiel			
Decontaminating Apparatus Portable, DS2, ABC M11 4230-00-720-1618/F81469	CTA 50-909 (N)	IV/SF	Per CTA	TM 3-4230-204-12&P
Decontaminating Apparatus Portable, DS2, ABC M13 4230-01-133-4124/D81537	CTA 50-909 ( )	II/SF	Per CTA	TM 3-4230-214-12&P
Decontaminating Agent No. 2 (DS2), 1-1/3 Qt. Can 6850-00-753-4827	CTA 50-970 (X)	II/SF	Per CTA	TB CML 113
Decontaminating Agent No. 2 (DS2), 5-Gal Can 6850-00-753-4870	CTA 50-970 (X)	II/SF	Per CTA; Decon unit per basic load	TB CML 113

Decontaminating, Agent, STB 50-lb Drum 6850-00-297-6653	CTA 50-970 (X)	III(P)/SF	Per CTA; Decon unit per basic load	SB 3-6850-2
Decontaminating Kit, M291 4230-01-276-1905	CTA 50-970 (X)	II/SF	3 per indiv contingency/ 1 training	TM 3-4230-229-10
Decontaminating Kit, M258A1 4230-01-101-3984	CTA 50-970 (X)	II/SF	2 per indiv contingency	TM 3-4230-216-10
Decontamination Kit, Individual Equipment: M280 4230-01-206-4252	CTA 50-970 (X)	II/SF	Per CTA Item no longer available	TM 3-4230-224-10
Decontaminating Apparatus, Lightweight, M17 4230-01-251-8702/D82404	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4230-228- 12&P
Decontaminating Apparatus; Portable, Type A/E32U-8 4230-01-153-8660/D82404	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4230-218- 14&P
Decontaminating Apparatus Skid Mtd., 500 Gal, M12A1 4230-00-926-9488/F81880	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4230-209-12 TM 3-4410-201-12
Detergent, General Purpose 7930-00-634-1362	CTA 50-970 (X)	II/SF	Per CTA, Decon unit per basic load	TM 3-4240-209-12
Antifoam Compound (5 gal) 6850-00-950-6489	CTA 50-970 (X)	II/SF	Per CTA, Decon unit per basic load	TM 3-4240-209-12
Antiset Compound, Decontaminating, Slurry, M2 6850-00-656-0926	CTA 50-970 (X)	II/SF	Per CTA, Decon unit per basic load	TM 3-4230-209-12
	Collective Protection Materiel			
Filter Unit, Gas Particulate M6A1 4240-00-889-2317/H48911	MTOE/TDA (N)	VII/TDA	MTOE/TDA	TM 3-4240-241-12 TM 3-4240-241- 20&P
Filter, Particulate, M9A1 4240-00-050-8781	See ref (X)	IX/SF	MTOE/TDA	TM 3-4240-241-12
Filter, Gas, M10 4240-00-256-9094	See ref (X)	IX/SF	MTOE/TDA	TM 3-4240-241-12
Collective Protection Equip NBC, Simplified, M20 4240-01-166-2254/C79000	MTOE/TDA (N)	VII/PA	MTOE/TDA	TM 3-4240-288- 12&P
Collective Protection Shelter System, M51 4240-00-854-4144/T00474	MTOE/TDA (N)	VII/PA	MTOE/TDA	TM 3-4240-264-12 TM 5-2805-259-14
Collective Protection Equip M10 (Hawk) 4240-00-736-7743/E52453	MTOE/TDA (N)	VII/PA	MTOE/TDA	TM 3-4240-229-12

Filter, Gas 4240-00-802-5170	See ref	IX/SF	MTOE/TDA	TM 3-4240-229-12
Filter, Particulate M24 4240-00-802-5169	See ref (X)	IX/SF	MTOE/TDA	TM 3-4240-229-12
Modular CPE:				
Protective Entrance, M10 4240-00-229-2610/H10908	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4240-284-20&P TM 3-4240-284-30&P
Protective Entrance, M12 4240-01-048-2923/E11043	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4240-286-20&P TM 3-4240-286-30&P
Protective Entrance, M13 4240-01-155-9971	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4240-318-20&P
Protective Entrance, M14 4240-01-105-5521	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4240-323-20&P
Filter Unit, Gas Particulate, M56 4240-00-237-0277/H48904	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4240-322-20&P
Filter Unit, Gas Particulate, M59 4240-00-237-0223	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4240-324-20&P
Filter Unit, Gas Particulate, M84 4240-01-149-1719	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4240-333-20&P
Filter Unit, Gas Particulate, M87 4240-01-192-7234	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4240-317-20&P
Static Frequency Converter, M5 4240-00-394-9571	System TM (X)	IX/SF	As required	TM 3-4240-299-23&P
Filter Set, Gas & Particulate 4240-01-067-5605	See ref (X)	IX/SF	MTOE/TDA	See system TM
Filter, Particulate 4240-01-066-3266	See ref (X)	IX/SF	MTOE/TDA	See system TM
Filter Unit, Gas Particulate, M93 4240-01-231-6515	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4240-315-20&P
Filter, Gas Particulate, M48 4240-01-161-3710	See ref (X)	IX/SF	MTOE/TDA	See system TM
Vehicle CPE:				
Filter Unit, Gas Particulate, M13A, 14240-00-964-9061/H50555	MTOE/TDA (N)	IX/SF	Per MTOE/ TDA	TM 3-4240-276-30&P See system TM

Filter, Gas, M18 4240-00-828-3952	See ref (X)	IX/SF	MTOE/TDA	See system TM
Filter, Particulate, M19 4240-00-866-1825	See ref (X)	IX/SF	MTOE/TDA	See system TM
Filter Unit, Gas Particulate, M8A3, 4240-00-853-3201/H50829	MTOE/TDA (N)	IX/SF	Per MTOE/ TDA	TM 3-4240-276-30&P See system TM
Filter, Gas, M12A1 4240-00-289-7978	See ref (X)	IX/SF	MTOE/TDA	See system TM
Filter, Particulate, M13 4240-00-368-6291	See ref (X)	IX/SF	MTOE/TDA	See system TM
Filter, Unit, Gas Particulate, M14, 4240-00-010-5267/H48896	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4240-276-30&P TM 9-2300-257-10
Filter Unit, Gas Particulate, M7A1, 4240-00-203-3999/H50418	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-4240-201-13
Tester, Airflow GPFU, M39 6680-00-436-4212/W02526	MTOE/TDA (N)	II/SF	Per MTOE/ TDA	TM 3-6680-316-10
Smoke and Flame Materiel				
Carrier, Smoke Generator 2350-01-203-0188/C12815	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-1040-279-12&P
Generator Set, Smoke, Mechanical Pulse Jet, M157 1040-01-206-0147/G51840	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-1040-279-12&P
Generator, Smoke, M3A4 1040-00-143-9506/J30492	MTOE/TDA (N)	VII/PA	Per MTOE/ TDA	TM 3-1040-276-10 FM 3-1040-276-23 FM 3-1040-276-23P FM 3-50
Smoke Pot, Floating, HC, M4A2, 1365-00-598-5220 (DOCIC K867)	See ref (X)	V/PA	As required	FM 3-50
Smoke Pot, Floating, SGF2, M7A1 1365-00-973-2459 (DODIC K861)	See ref (X)	V/PA	As required	FM 3-50
Fuse, Smoke Pot, Elec M209 1365-00-025-3280/J17032	See ref (X)	V/PA	1 PER M7A1 smoke pot	FM 3-50 SB 3-30-174
Smoke Pot: HC, 10 lb, M1 1365-00-219-8512 (DODIC K865)	See ref (X)	V/PA	As required	FM 3-50
Smoke Pot: HC, 30 lb, M5 1365-00-598-5207 (DODIC K866)	See ref (X)	V/PA	As required	FM 3-50
Fog Oil, Type SGF-2 (55 gal drum)	See ref (X)	III(P)/SF	IAW basic load	FM 3-50

9150-00-261-7895				
Flamethrower, Port, M9A1-7 1040-00-089-5034/H68063	MTOE/TDA (N)	VII/PA	MTOE/TDA	TM 3-1040-257-14 TM 3-366
Launcher, Grenade, Smoke Screening	MTOE/TDA	VII/PA	MTOE/TDA	
M239 1040-01-015-0874/L44612	(N)			TM 3-1040-266-20&P
M243 1040-01-059-0560/L67021	(N)			TM 3-1040-267-20&P
M250 1040-00-000-0138/L44680	(N)			TM 3-1040-268-20&P
M257 1040-01-070-1213/L44031	(N)			TM 3-1040-267-20&P
M259 1040-01-107-7501/Z37754	(N)			TM 3-1040-267-20&P
Thickener, Flame, M4, 2.5 lb 1365-00-926-4076 (2.5 lb) (DODIC K917) 1365-00-143-7139 (25 lb)/W12352 (DODIC K920)	SB 38-26 (X)	V/PA	CTA 50-970	TM 3-366
Hazard Calculation Materiel				
Area Predictor, Radiation Fallout; M5A2 6665-00-106-9595	CTA 50-970 (X)	II/SF	Per CTA	TM 3-6665-304-10 TM 3-210
Calculator Set, RADIAC and Nuclear Yield; M28A1 6665-00-130-3616/C72000	CTA 50-970 (X)	II/SF	Per CTA	TM 3-6665-303-10
Fallout Prediction Plotting Scale; ML-556/UM 6675-00-868-8094	CTA 50-790 (X)	II/SF	Per CTA	FM 3-3
Riot Control Materiel				
Disperser, Riot Control	MTOE/TDA	VII/PA	Per MTOE/	TM 3-1040-220-12&P
Agent, Vehicle or Helicopter MTD, M5 1040-00-805-3019/G22109	(N)		TDA	
Disperser, Riot Control	MTOE/TDA	VII/PA	Per MTOE/	TM 3-1040-262-13&P
Agent, M33A1 1040-00-148-9824/G22348	(N)		TDA	
Riot Control Agent, CR	CTA 23-101/50-909	V/PA	Per CTA	TM 3-1040-262-13&P
(3 gal) 1365-01-172-3688 (DODIC K758)	(X)			
Riot Control Agent, CS1, (8 lb) 1365-00-926-1914 (DODIC K766)	CTA 23-101 (X)	V/PA	Per CTA	FM 19-15 TM 3-250
Riot Control Agent, CS2, (8 lb) 1365-00-935-6016 (DODIC K766)	SB 38-26 (X)	V/PA	Per SB	FM 19-15 TM 3-250

Service Kit, RCA Disperser; M27 1040-00-736-3230/S78771	MTOE/TDA (N)	II/SF	Per MTOE/ TDA	TM 3-1040-221-12
Service Kit, RCA Disperser; M254 1040-00-157-6974/S78839	MTOE/TDA (N)	II/SF	Per MTOE/ TDA	TM 3-1040-262-13&P
	Training Materiel			
Training Aid, Skin Decontaminating, M58A1 6910-01-101-1768	CTA 50-970 (X)	II/SF	Per CTA	TM 3-4230-216-10
Refill Kit, Training Aid, M58A1 6910-01-113-2434	CTA 50-970 (X)	II/SF	Per CTA	TM 3-4230-216-10
Training Kit, M256 6665-01-112-1644	CTA 50-970 (X)	II (SF)	Per CTA	TM 3-6665-320-10
Decon Training Aid, Ind Equip 4230-01-207-1911	CTA 50-970 (X)	II/SF	Per CTA	TM 3-4230-224-10
Container, Training, M13 DAP 4230-01-136-8889	See ref (X)	IX/SF	As required	PS Magazine #435 Feb 89
Stimulant, Cml Agent, Polyethylene Glycol(PEG 200) 6810-01-074-9719	CTA/(TBP) (X)	IX/SF	Per CTA	FM 3-7
Simulator, Projectile Airburst, Liquid, M9 (SPAL) 1370-01-047-3479/S57611	CTA 23-100-6 (X)	V/SF	Per CTA	TM 9-1370-100-10 SB 700-20
Launcher, Projectile, Liquid, Airburst: M267 6920-01-110-7680/L24961	MTOE/TDA (N)	II/PA	Per MTOE/ TDA	TM 3-6920-100-12&P
Talc, Tech, T3, 40 lb 6810-00-142-9849	CTA 50-970 (X)	II/SF	Per CTA	TM 43-0001-26-2
Amyl Acetate, Tech Syn (Banana Oil) 6810-00-123-7047 (pint bottle) 6810-01-115-7792 (ampules)	CTA 50-970 (X)	III(P)/SF	Per CTA	TM 3-4240-290-20&P
Bag, NBC Equipment 8465-01-216-6259	CTA 50-900 (X)	II/SF	Per CTA	This reg
Riot Control Agent, CS Capsule 1365-00-690-8656 1365-00-690-8655/E06146	CTA 50-909 (X)	V/PA	CTA 50-909	FM 3-9

NOTE: The glossary defines abbreviations and acronyms used in this table.

APPENDIX C
STORAGE OF CHEMICAL DEFENSE EQUIPMENT

C-1. PURPOSE
This appendix provides additional storage, accountability, inspection, and maintenance requirements for selected chemical defense equipment (CDE).

C-2. GENERAL

a. Requirements in this appendix modify the criteria in the basic regulation to enable bulk storage of CDE while ensuring serviceability. The appropriate supply bulletin (SB) on storage serviceability standards should be consulted for detailed requirements.

b. This appendix does not establish requirements to store the items described nor does it limit items that can be stored. Unique storage requirements (for example, prepositioning of materiel configured to unit sets (POMCUS) versus reserve storage activities (RSAs)) are recognized and addressed in this appendix.

c. RSAs and supply storage activities (SSA) will maintain records by national stock number (NSN), date of manufacture, lot number, contract number, and quantity. The storage activity will periodically review records and conduct required inspections. The reviews and inspections will ensure serviceable stock is maintained and the timely input of condition-code changes to the availability balance file (ABF). Storage activities will send a copy of DD Form 1225 (Storage Quality Control Report) and the ABF to the Item Manager, 200th Materiel Management Center (Theater Army), when condition code changes occur.

C-3. CHEMICAL PROTECTIVE CLOTHING (OVERGARMENTS, FOOTWEAR COVERS AND OVERBOOTS, AND GLOVES)

a. Chemical Protective Clothing. Chemical protective clothing will be bulk-stored at POMCUS and RSA sites. Boxes will not be opened to make an exact count but stored to the next higher quantity that will allow boxes to remain sealed.

b. Serviceability and Inspection Criteria. Serviceability and inspection criteria for the chemical protective ensemble (CPE) is as follows—

(1) Shelf life for rubber items is 36 months (except the green vinyl overboot (GVO), which is 60 months). The shelf life of all items is extendable at 24-month intervals using the inspection criteria in Technical Bulletin (TB) 740-10. Outer surfaces should be examined for stains, discoloration, stickiness, or cracks in rubber and other signs of damage or deterioration. Items may be removed from their package for inspection, but should be replaced in the package for protection during storage. Table C-1 gives reinspection intervals and reinspection limits.

Table C-1
Reinspection Intervals and Limits

Limit	Reinspection Interval (months)	Reinspection Limit
Glove Set, CP (all sizes)	24	unlimited
Footwear, CP (all sizes)	24	unlimited
GVO (all sizes)	24	unlimited
Helmet Cover, CP	24	unlimited

(2) Shelf life of the battle dress overgarment (BDO) and chemical protective overgarment (CPO) is determined through surveillance testing. Packaged BDOs and CPOs should be retained pending results of tests and receipt of disposition instructions. Unserviceable BDOs and CPOs are used as training overgarments.

c. Storage of CPE. To help prevent damage, CPE items will be stored in their factory package until issued.

(1) Unit Storage.

(a) Units will maintain two sets of the CPE for each individual.

(b) BDOs and CPOs should be handled with care to protect them from significant direct exposure to moisture, smoke, and fuel-solvent vapors, which would jeopardize the protective qualities of the overgarment. Holes, tears, or broken seams in vapor barrier bags should be sealed to protect overgarments. Common duct tape provides an appropriate and expedient level of protection (for example, tape, pressure adhesive, NSN 7510-00-074-5124).

(c) Puncturing of BDO and CPO vapor-barrier bags to remove excess air making the bag smaller is discouraged. If not done carefully, the overgarment could be damaged, making it unserviceable. Commanders, however, may authorize use of this procedure. If authorized, puncture holes should be as small as possible and be made in only one side and at one corner of the vapor-barrier bag. Puncture holes should be sealed using the procedures in b above.

(2) Accountability of BDOs and CPOs. Contingency and training BDOs and CPOs must be accounted for according to AR 710-2-1 (chap 4, para 4-1).

d. Obtaining Special-Measurement Overgarments.

(1) The procedures below are used for obtaining overgarments for personnel who cannot be properly fitted with standard tariff sizes.

(a) Military clothing sales stores will ensure that personnel are measured for special measurement clothing.

(b) Measurements will be recorded on DD Form 358 (Armed Forces Measurement Blank (Special Sized Clothing for Men)) or DD Form 1111 (Armed Forces Measurement Blank (Special Sized Clothing for Women)).

(c) DD Form 358 and DD Form 1111 will be pre-pared in sufficient quantities to meet internal requirements. The original copy of DD Form 358 or DD Form 1111 will be sent to the Commander, Defense Personnel Support Center, ATTN: Directorate of Clothing and Textiles (DPSC-FODR), 2800 South 20th Street, Philadelphia, Pennsylvania 19101. DD Form 1348 (DOD Single Line Item Requisition System Document (Manual)) or DD Form 1348M (DOD Single Line Item Requisition System Document (Mechanical)) for each item of clothing for each individual will be sent with DD Form 358 and DD Form 1111. Requisitions can be sent by FAX to the Requisition Processing Section, Defense Personnel Support Center (DSN 444-3806 or commercial (215) 737-3806).

(2) When the requisitioned item is received, it will be made immediately available to the individual for whom it was ordered. When an individual is transferred, special measurement clothing will be transferred with that individual.

(3) The commander determines the quantity of special-fit BDOs to be requisitioned. The unit chemical officer or NCO should be consulted.

C-4. DECONTAMINANTS

a. Decontaminating Solution Number 2. Decontaminating solution number 2 (DS2) is an alkaline-corrosive liquid and could cause extensive damage if allowed to leak on equipment. The M13 decontaminating apparatus, portable (DAP), will not be stored mounted on vehicles. DS2 should be stored in a dry area to reduce corrosion of containers. DS2 is irritating to the skin and the fumes are toxic.

b. Super Tropical Bleach. Super tropical bleach (STB) is a mixture of chlorinated lime and calcium oxide in white powder form.

(1) STB should be stored in a cool, dry area. If leakage of STB occurs, chlorine will be released into the air. If personnel encounter a strong smell of chlorine, they will immediately leave the area and put on a protective mask or self-contained breathing apparatus (SCBA) before determining the source of the leak.

(2) STB has a 5-year shelf life, which can be extended indefinitely. The owning activity (storage activity) will maintain the dates of manufacture and lot numbers of STB. Six months before the expiration date, the owning activity should contact the Director of Bulk Fuels, Quality Surveillance Branch, 200th Materiel Management Center (Theater Army), ATTN: AEAGD-MMC-BT-Q, APO AE 09052 (494-6005/7312), to determine status of shelf-life and testing requirements.

CAUTION. DS2 and STB can produce fire hazards. DS2 and STB must be stored in separate areas where they will not mix if leakage occurs. If DS2 and STB mix, they will ignite. Additionally, if strong acids combine with STB, a fire will result. If a sealed can of STB is heated to 300 degrees Fahrenheit (150 degrees centigrade), an explosion could result. DS2 will burn if exposed to an open flame.

C-5. PROTECTIVE MASKS AND FILTER ELEMENTS

a. Accountability. Protective masks will be accounted for by lot number at property book level (AR 710-2, chap 2, sec II, para 2-5m(2)(6)). Protective masks will be identified by lot numbers using one of the following—

(1) The branded 5 digit number on the forehead or temple tab.

(2) The stenciled lot number located on the cheek panel, if the number in (1) above is not present.

(3) The medallion data (for example, 69MSA2ES), if the number in (1) or (2) above is not present. The medallion is located near the outer-right temple of the mask.

b. Serviceability. Protective masks are serviceable if they meet criteria in the preventive maintenance checks and services (PMCS) section of the operator's technical manual (TM).

c. Repair and Disposition. Repair of masks above the organizational level is performed only at United States Army Armament, Munitions, and Chemical Command re-pair facilities. Unserviceable protective masks will be turned in to the supporting SSA according to USAREUR Regulation 710-2 and the SSA standing operating procedure.

Unserviceable protective masks will not be turned in to defense reutilization and marketing offices.

d. M13A2 Filter Elements, M10A1 and C2 Canisters, and Collective Protection Filters. These items will be stored in a dry location. Filters and canisters must be maintained in factory-sealed packing. Manufacturer and lot identity must be maintained and monitored using SB 3-30-2 and message updates to ensure correct serviceability data is posted to the ABF.

C-6. M11 DECONTAMINATION APPARATUS

In POMCUS, the M11 will be mounted on the vehicle and a box of five nitrogen cylinders (NSN 4230-00-775-7541) will be available for each M11. DS2 will not be stored in the M11. If M11s are used during field exercises, they will be prepared for storage according to TM 3-4230-204-12&P.

C-7. DETECTION AND WARNING MATERIAL

a. Radiation Detection, Identification, and Computation Equipment. Radiation detection, identification, and computation (RADIAC) meters detect or measure alpha, beta, gamma, X-ray, or neutron radiation and provide data in various units of measure. RADIAC equipment is calibrated at prescribed intervals (TB 43-180). Calibration of RADIAC equipment is done by test, measurement, and diagnostic equipment (TMDE) units. Calibration will be scheduled so that at least 50 percent of any one type of instrument is available to the unit at all times. Personnel should consult their unit calibration officer and TMDE master listing for further information. RADIAC meters are related to health and safety and are categorized as follows:

(1) RADIAC Meters, Active. These meters are used full or part time in day-to-day Army operations for making quantitative measurements of radioactive contamination and determining radiation levels. The meters are used by organizations whose personnel handle, use, maintain, store, transport, or dispose of materials and equipment that produce ionizing radiation. Active RADIAC meters are calibrated every 90 days.

(2) RADIAC Meters, Contingency. These meters are maintained in a storage or standby status for use in contingency plans related to a nuclear accident or incident, or as a defense against the effects of a nuclear attack. Most meters in USAREUR are in this category. Contingency meter calibration intervals are longer than intervals for active meters. Contingency calibration intervals are shown in table C-2.

b. M8A1 Alarms and Chemical Agent Monitors. M8A1 alarms and chemical agent monitors (CAMs) will be stored under the guidelines of the applicable Nuclear Regulatory Commission license, AR 385-11, and USAREUR Regulation 385-12. The local radiation protection officer will provide assistance. Detailed storage guidance is in the applicable TM.

Table C-2
Contingency Calibration Intervals (In Days)

RADIAC INSTRUMENT	120	360	430	480	1,080
AN/VDR-2		X			
IM-174/PD			X		
AN/PDR-27				X	
IM-9E/PD					X
IM-93/UD					X
IM-147/PD					X
AN/PDR-75		X			
AN/PDR-56	X				
AN/PDR-60	X				

c. Depots and Storage Activities.

(1) Depots and storage activities authorized to store bulk quantities of M43A1 and CAMs will store the items in fire resistant buildings in rooms or cages designated for storage of radioactive items. Storage areas must be—

(a) Free from the danger of flooding.

(b) Outside the danger radius of flammables or explosives.

(c) Secured against unauthorized removal.

(2) Storage areas must be posted according to AR 385-30. A maximum of 2,000 CAMs may be stored in a single storage area. There is no limit on the quantity of M43A1s or detector cells per storage location.

(3) Depot and storage activity areas used for M43A1 or detector cell storage will be monitored monthly with porta-ble RADIAC equipment. Wipe tests of bulk storage areas will be performed quarterly. Wipe tests will be analyzed by a gas-flow proportional-counting system or equivalent alpha-detection instrumentation.

C-8. M12A1 POWER DRIVEN DECONTAMINATION APPARATUS

The M12A1 power driven decontamination apparatus (PDDA) must be removed from storage and tested every 4 years to prevent deterioration of plumbing and electrical systems. If the M12A1 PDDA is used during a field exercise, within the prescribed time limit, this exercise may

be substituted for the scheduled POMCUS exercise. If the field exercise is substituted, it is not a substitute for scheduled maintenance. Maintenance will be conducted before returning the M12A1 PDDA to storage.

C-9. MEDICAL ITEMS

a. Accountability of Antidotes.

(1) The Mark I (MK-I) nerve agent antidote kit (NAAK) and nerve agent pyridostigmine pretreatment (NAPP) are limited shelf-life items requiring accountability and records so they can be tested for potency, suspended, extended, or destroyed as necessary. The owning unit will maintain the following information on each item—

(a) NSN.

(b) Item description.

(c) Manufacturer and contract number.

(d) Lot or batch number.

(e) Original expiration date.

(f) Extended expiration date, if applicable.

(g) Quantity on hand.

(2) Potency tests for the MK-I and NAPP kits will be performed by the United States Army Medical Materiel Agency. Commanders will contact their local medical supply activity (battalion aid station, division medical supply office (DMSO), troop medical clinic (TMC), or hospital) for disposition instructions.

(3) Monthly inventories will be conducted by a disinterested officer, warrant officer, or noncommissioned officer (staff sergeant or above). The inventory may be taken by the same person selected for arms room inventory; separate appointing orders do not have to be prepared. The signed and dated record will be maintained until the next inventory is taken.

b. Unserviceable Antidote Items. Units will be notified of unserviceable antidote items by message. Unserviceable antidote items will be inspected according to TB 740-10. Units will report unserviceable items to the supporting class VIII supply manager (battalion aid station, DMSO, TMC, or hospital).

APPENDIX D
CHEMICAL DEFENSE EQUIPMENT DISPOSAL AND TURN-IN PROCEDURES

D-1. PURPOSE

This appendix provides procedures for disposal and turn-in of chemical defense equipment (CDE) and radioactive waste. Additional details for specific items will be provided by message by 200th Materiel Management Command (Theater Army) (200th MMC (TA)), if required.

D-2. CDE

a. General. Many CDE items have been identified as containing regulated hazardous materiels/hazardous wastes (HM/HW) and must be managed as such, when unserviceable or slated for disposal, under applicable U.S. and host nation laws. Since management of HM/HW is strictly regulated and penalties for noncompliance are severe, applicable environmental regulations must be complied with fully.

(1) Units having unserviceable CDE for disposal will contact the supply storage activity (SSA) that normally issues the item. The SSA will evaluate the property condition and, if appropriate, direct turn in to the defense reutilization and marketing office (DRMO). Property will not be turned in directly to the DRMO without SSA approval. The SSA standing operating procedure gives turn-in policy and required documents.

(2) Serviceable CDE will be sent to DRMOs only when turn in is directed by 200th MMC (TA). Repairable items (protective masks and M12A1 decontamination apparatus) that are unserviceable and cannot be repaired in the field must be reported to 200th MMC (TA) so that these items can be brought back into the repair program.

b. HW Disposal Procedures. Units will—

(1) Notify the environmental manager at the directorate of engineering and housing (DEH) that HW has been generated. The DEH will provide a billing Department of Defense activity address code (DODAAC) required to go on DD Form 1348-1A (DOD Single Line Item Release/Receipt Document), card columns 31 through 43. The DEH is funded for HW disposal. The DEH will then bill the unit (generator) for a refund.

(2) Contact the director of logistics (DOL) for information on transporting, packaging, and documentating HW for turn-in to the DRMO.

(3) Contact the servicing DRMO environmental monitor to confirm packaging, demilitarization, and documents required to meet DRMO requirements. DRMO has a hand-book that provides CDE demilitarization procedures. Units should then make a turn-in appointment. Items will not be accepted at DRMO without an appointment. Units should follow the DRMO SOP.

c. Item Listing. The items in table D-1 must be handled as HM/HW and disposed of or turned in as such.

Table D-1
Item Listing

NSN	NOMENCLATURE	MODEL
6665-00-016-8399	Detector Kit	M256
6910-00-106-4800	SCAITS	M72A1
4230-00-123-3180	Skin Decon	M258
6665-00-171-9745	Food Test Kit	M3
6665-00-171-9747	Water Test Kit	M2
6850-00-297-6653	STB	
6850-00-753-4827	DS2, 1-1/3 Qt. Can	
6850-00-753-4870	DS2, 5 Gal. Can	
6665-00-776-8810	Sampling & Analysis Kit	M19
6665-00-776-8819	Refill Kit	M33
6630-00-783-8192	Testing Kit Impreg	M2
6665-00-856-8236	Blue Band Tubes	
6665-00-859-2214	Refill Kit	M229
6665-00-903-4765	Detector Kit	M15
6665-00-903-4766	Detector Kit	M15A2
6665-00-903-4767	Detector Kit	M18A2
4230-00-907-4828	Decon & Reimpreg	M13
6665-00-909-3647	Refill Kit	M30A1
6910-01-021-8789	Refill Kit	M58
6910-01-043-2090	SCAITS	M72A2
6910-01-101-1768	Training Aid	M58A1
4230-01-101-3984	Decon Kit	M258A1
6665-01-112-1644	Simulator, Detector	
6910-01-113-2434	Refill Kit	M58A1
4230-01-133-4124	Decon Apparatus (-)	
4230-01-136-8888	Fluid Container	M13
6665-01-133-4964	Detector Kit	M256A1
6665-01-134-0885	Water Test Kit	M272
6910-01-148-7011	Training Aid	M58
4230-01-201-1911	Decon Training Aid	M280
4230-01-206-4252	Decon Kit	M280
All filters/canisters	All	

NOTE 1. Since the chemical composition of filters and canisters is the same, multiple NSNs may be packed in the same container. If more than one NSN item is being turned in using a single plastic bag or overpack, NSN 4240-00-LAB-PACK will be used in card columns 8 through 22 of DD Form 1348-1A. An additional sheet of paper listing the complete NSN and quantity of each type filter or canister must be attached to DD Form 1348-1A.

NOTE 2. Items must be turned in using DD Form 1348-1A (6 copies).

D-3. DISPOSAL OF RADIOACTIVE WASTE.

a. Items containing radioactive sources and materials are identified using the special control item (SCI) code on the Army Master Data File. One of the following codes in the SCI column indicates an item contains radioactive material and must be handled accordingly, 8, A, B, F, G, H, K, S, T, U, W, or X.

b. Units and organizations are authorized to turn in radioactive materials to one of the following facilities:

(1) PRIMARY.

Chief, USAREUR Radioactive Waste Processing Facility,
524th Maintenance Company (TMDE)
Unit 23631
APO AE 09138
(495-6486/7293)

(2) ALTERNATE.

Chief, Reserve Storage Activity, Kaiserslautern
(RSAK) Receiving Branch, Kaiserslautern
Unit 23202
APO AE 09325
(483-7225/7419)

c. Units must contact the receiving activity in advance to schedule an appointment and verify turn-in documentation and packaging requirements. Units also should check with their DOL to ensure compliance with applicable transportation requirements.

d. USAREUR Regulation 385-12 provides procedures for disposing of radioactive waste. Additional information may be obtained from the local radiation protection officer and the USAREUR Radiation Control Officer, 200th MMC (TA) (494-6337/7369).

GLOSSARY

200th MMC (TA)	200th Materiel Management Center (Theater Army)
ABF	availability balance file
ACE	armored combat earthmover
ADA	air defense artillery
AM 241	Americium 241
AMDF	Army Master Data File
APC	armored personnel carrier
AR	Army Regulation
ARTEP	Army Training and Evaluation Program
BCC	battery control central
BDO	battle dress overgarment
°C	centigrade
C2	command and control
CAM	chemical agent monitor
CANA	convulsive anti-nerve-agent
CB	chemical biological
CBR	chemical, biological, radiological
CDE	chemical defense equipment
CEV	combat engineer vehicle
CFV	cavalry fighting vehicle
CIF	central issue facility
CPE	collective protection equipment
CPO	chemical protective overgarment
CRISP	Controlled Radioactive Inventory Serialization Program
CTA	common tables of allowances
DCSLOG, USAREUR	Deputy Chief of Staff, Logistics, United States Army, Europe
DKIE	decontaminating kit, individual equipment
DMSO	division medical supply office
DODAAC	Department of Defense activity address code
DODIC	Department of Defense identification code
DOL	director of logistics
DRMO	defense reutilization and marketing office
DS2	decontaminating solution number 2
EAC	emergency action center
EMD	electric motor driven
EOD	explosive ordnance personnel
°F	Fahrenheit
FCCPO	footwear covers, chemical protective, overboots
FDC	fire direction center
FFE	fire fighting equipment
FM	field manual
FTX	field training exercise
GED	gasoline engine driven
GPFU	gas particulate filter unit
GSCP	glove set, chemical protective
GVO	green vinyl overboots
HC	hydrogen chloride
HDU	helmet display unit
hr	hour
HW	hazardous waste
ICE	individual chemical equipment
IFV	infantry fighting vehicle
LP	limited procurement (CAM)
LTA	local training area
mg	milligram
MK-I	Mark I
ml	milliliter
MOBTDA	mobilization tables of distribution and allowances
MOS	military occupational specialty
MRAD	milliradiation absorbed dose
MTOE	modification tables of organization and equipment
N	Nonexpendable
NAAK	nerve agent antidote kit
NAPP	nerve agent pyridostigmine pretreatment
NBC	nuclear, biological, chemical
NCO	noncommissioned officer
NRC	Nuclear Regulatory Commission
NSN	national stock number
OCIE	organizational clothing and individual equipment
OMA	operation and maintenance, Army
OPA	other procurement, Army
PA	procurement appropriation
PB	prydostigimine bromide
PCS	permanent change of station
PDDA	power driven decontamination apparatus
PE	protective entrance
PEG 200	polyethylene glycol
PMCS	preventive maintenance checks and services
POMCUS	prepositioning of materiel configured to unit sets
RAD	radiation absorbed dose
RADIAC	radiation detection, identification, and computation
RCO	radiation control officer
RPO	radiation protection officer
RSA	reserve storage activity
SB	supply bulletin
SCBA	self-contained breathing apparatus
SCPE	simplified collective protection equipment
SCPO	suit, chemical protective overgarment
SF	stock funded

SOP	standing operating procedure
SPAL	simulator, projectile, airburst, liquid
SSA	supply storage activity
STB	super tropical bleach
TAP	toxicological agent protective
TASC	training aid support center
TDA	tables of distribution and allowances
TM	technical manual
TMC	troop medical clinic
TMDE	test, measurement, and diagnostic equipment
TOE	tables of organization and equipment
USAREUR	United States Army, Europe
VEESS	vehicle engine exhaust smoke system
WP	white phosphorus
L	large
M	medium
S	small
X	expendable
XL	extra large
XS	extra small
XXL	extra, extra large
XXS	extra, extra small
XXXS	extra, extra, extra small

USAREUR Reg 50-3

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